CLAIMS

1. A meat analogue composition comprising from 2.0% to 40.0% by weight of a fat composition; from 5.0% to 35.0% by weight of a non-animal protein; from 20.0% to 75.0% by weight of water; and from 0.1% to 5% by weight of one or more acidic ingredients, wherein the acidic ingredients are encapsulated.

2. The meat analogue composition according to Claim 1, wherein the meat analogue composition comprises from 0.1% to 4% by weight of the one or more acidic ingredients; preferably wherein the meat analogue composition comprises from 0.1% to 2.5% by weight of the one or more acidic ingredients; preferably wherein the meat analogue composition comprises from 0.1% to 1.0% by weight of the one or more acidic ingredients; preferably wherein the meat analogue composition comprises from 0.30% to 0.80% by weight of the one or more acidic ingredients; more preferably wherein the meat analogue composition comprises from 0.40% to 0.60% by weight of the one or more acidic ingredients.

3. The meat analogue composition according to any preceding claim, wherein the one or more acidic ingredients comprise an inorganic acid, an organic acid or a combination thereof; preferably wherein the organic acid is selected from citric acid, acetic acid, ascorbic acid, fumaric acid, succinic acid, lactic acid, malic acid, tartaric acid, or a combination thereof; and/or wherein the inorganic acid is selected from hydrochloric acid, phosphoric acid, sulphonic acid, sulfuric acid, or a combination thereof.

4. The meat analogue composition according to any preceding claim, wherein the one or more acidic ingredients comprise citric acid; and wherein the one or more acidic ingredients are present in the meat analogue composition in an amount of from 0.1% to 1% by weight, and more preferably from 0.3% to 0.8% by weight; more preferably wherein the one or more acidic ingredients comprise citric acid; and wherein the one or more acidic ingredients are present in the meat analogue composition in an amount of from 0.3% to 0.8% by weight, and more preferably from 0.40% to 0.60% by weight.

5. The meat analogue composition according to any preceding claim, wherein the one or more acidic ingredients are encapsulated within a fat matrix; preferably wherein the one or more acidic ingredients are encapsulated within a fat matrix of the fat composition.

6. The meat analogue composition according to claim 5, wherein the acidic ingredients are encapsulated within a fat matrix in bulk form.

7. The meat analogue composition according to any preceding claim, wherein the one or more acidic ingredients are encapsulated by a coating.

8. The meat analogue composition according to any preceding claim, wherein the acidic ingredients are in the meat analogue composition in the form of coated particles, coated flakes and/or coated granulates.

9. The meat analogue composition according to Claim 7 or 8, wherein the coating comprises a water insoluble hydrophobic coating.

10. The meat analogue composition according to any one of Claims 7 to 9, wherein the coating is adapted to degrade at temperatures above 30°C, preferably 45°C, more preferably 60°C and most preferably 65°C.

11. The meat analogue composition according to any one of Claims 7 to 10, wherein the coating comprises a fat coating, a carbohydrate coating, a monoacylglyceride (MAG) coating, or a combination thereof.

12. The meat analogue composition according to any one of Claims 7 to 11, wherein the coating comprises a fat coating selected from palm oil, rapeseed oil, hydrogenated rapeseed oil, soybean oil, hydrogenated soybean oil, coconut oil, interesterified coconut oil, shea butter, an interesterified blend of shea butter and coconut oil, an interesterified blend of shea stearin and coconut oil, any fraction thereof and/or any combination thereof.

13. The meat analogue composition according to any one of Claims 7 to 12, wherein the coating comprises a fat coating, and wherein the fat coating comprises a fat with a melting point of from 40ºC to 80ºC.

14. The meat analogue composition according to any one of Claims 8 to 13, wherein the coated particles, coated flakes and/or coated granulates have a particle size distribution of from 100µm to 3mm, preferably of from 200µm to 3mm, more preferably of from 400µm to 2mm, and advantageously of from 500µm to 1.3mm and/ or the coated particles, coated flakes and/or coated granulates have a particle size distribution of from 1mm to 7mm and preferably of from 2mm to 6mm.

15. The meat analogue composition according to claim any one of Claims 8 to 14, wherein the coated flakes have a thickness of from 0.2mm to 1.5mm and preferably from 0.3mm to 0.9mm or of from 0.9mm to 1.3mm; and a diameter of from 1 to 52mm.

16. The meat analogue composition according to any preceding claim, wherein the fat composition comprises one or more non-animal derived oils.

17. The meat analogue composition according to any preceding claim, wherein the fat composition comprises palm oil, coconut oil, sunflower oil, rapeseed oil, high oleic rapeseed oil, high erucic acid rapeseed oil, soybean oil, sunflower oil, high oleic sunflower oil, linseed oil, olive oil, corn oil, cottonseed oil, carinata oil, groundnut oil, shea butter, cocoa butter, allanblackia fat, kokum fat, mango kernel oil, illipe butter, palm kernel oil, babassu oil, high oleic safflower oil, peanut oil, avocado oil, rice oil, camelina oil, and a fraction of one of these oils or one or more fractions thereof or a mixture of two or more of the aforementioned oils and/or fractions.

18. The meat analogue composition according to any preceding claim, wherein the fat composition comprises from 20% to 85% by weight of saturated fatty acid residues; from 10% to 50% by weight of stearic acid residues (C18:0); and from 2% to 35% by weight of lauric acid residues (C12:0); wherein said percentages of fatty acid residues refers to fatty acids bound as acyl groups in glycerides in the fat composition and being based on the total weight of C4 to C24 fatty acid residues bound as acyl groups present in the fat composition.

19. The meat analogue composition according to any preceding claim, wherein the fat composition comprises from 20% to 85% by weight of saturated fatty acid residues; from 5% to 50% by weight of stearic acid residues (C18:0); from 2 to 35% by weight of linoleic acid residues (C18:2); and from 1 to 15% by weight of α-linolenic acid residues (C18:3); from 10 to 35% by weight of lauric acid residues (C12:0), 10% being excluded; wherein said percentages of fatty acid residues refers to fatty acids bound as acyl groups in glycerides in the fat composition and being based on the total weight of C6 to C24 fatty acid residues bound as acyl groups present in the fat composition; preferably wherein the fat composition comprises from 10% to 50% by weight of saturated fatty acid residues; from 5% to 50% by weight of stearic acid residues (C18:0); from 5 to 35% by weight of linoleic acid residues (C18:2); and from 1 to 15% by weight of α-linolenic acid residues (C18:3); wherein said percentages of fatty acid residues refer to fatty acids bound as acyl groups in glycerides in the fat composition and being based on the total weight of C6 to C24 fatty acid residues bound as acyl groups present in the fat composition.

20. The meat analogue composition according to any preceding claim, wherein the fat composition comprises an interesterified blend of vegetable oil and fully hydrogenated vegetable oil; preferably, wherein the fat composition comprises (a) from 5% to 95% by weight of the fat composition of a blending vegetable oil and (b) from 5% to 95% by weight of the fat composition of the interesterified blend of vegetable oil and fully hydrogenated vegetable oil; preferably wherein the fat composition comprises (a) a fat composition as defined in Claim 26; and (b) (i) a blend of a liquid vegetable oil and a fully hydrogenated liquid vegetable oil, or

(ii) a blend of a liquid vegetable oil and a vegetable oil stearin; preferably, wherein the liquid vegetable oil of (b) (i) or (b) (ii) comprises rapeseed oil; the fully hydrogenated liquid vegetable oil of (b) (ii) comprises fully hydrogenated rapeseed oil; and/or the vegetable oil stearin of (b) (ii) comprises palm stearin.

21. The meat analogue composition according to any of the preceding claims, wherein the fat composition is present in the meat analogue composition in an amount of from 5% to 40%, preferably from 10 to 25% by weight, by weight of the meat analogue composition.

22. The meat analogue composition according to any preceding claim, wherein the non-animal protein comprises protein derived from fungi, plants, bacteria or a combination thereof.

23. The meat analogue composition according to any preceding claim, wherein the meat analogue composition is substantially free of animal protein, preferably, wherein the meat analogue composition is free of animal protein; preferably wherein the meat analogue composition is substantially free of animal-derived products, preferably, wherein the meat analogue composition is free of animal-derived products.

24. The meat analogue composition according to any preceding claim, wherein the meat analogue composition is free of hydrogenated oils.

25. The meat analogue composition according to any preceding claim, wherein the meat analogue composition is free of sal butter, heme-containing protein, iron salt, transgenic plant cells, added lactic acid producing bacteria, fungal cell, alkali ingredients or any combination thereof.

26. The meat analogue composition according to any preceding claim, wherein the meat analogue composition further comprises one or more animal-derived products such as animal oils, marine oils, animal-derived proteins, animal-derived polysaccharides, or any combination thereof; preferably wherein the one or more animal-derived products comprise animal milk proteins, animal milk fats, or a combination thereof; and more preferably wherein the one or more animal-derived products are present in the meat analogue composition in an amount of from 1% to 20% by weight of the meat analogue composition.

27. A food product comprising a meat analogue composition according to any preceding claim.

28. The food product according to Claim 27, wherein the food product is an uncooked food product, a cooked food product, or a partially cooked food product.

29. The food product according to claim 27 or 28, wherein the food product is a vegetarian or vegan substitute food product.

30. The food product according to any one of claims 27 to 29, wherein the food product is a meat substitute food product such as a burger, sausage, pepperoni, meat ball, nugget, patty, mince product, chicken breast, meatloaf, bacon, steak, whole muscle, cold cuts, or other product intended to mimic conventional meat-based food products or a seafood substitute product such as a calamari analogue product; crustacean product such as a prawn analogue product, a lobster analogue product, a crab analogue product, a crabstick analogue product, a scampi analogue product; or a fish analogue product such as a fish cake or a fish filet; or other product intended to mimic conventional meat-based food products.

31. Use of one or more encapsulated acidic ingredients as a juiciness agent in a meat analogue composition.

32. Use according to Claim 31, wherein the use further comprises using the fat matrix or coating to improve juiciness of the meat analogue composition when cooked when compared to an analogous meat analogue composition comprising acidic ingredients as such, and/or an analogous meat analogue composition not comprising acidic ingredients.

33. Use of one or more encapsulated acidic ingredients as a mouthfeel agent in a meat analogue composition; preferably wherein the use further comprises using the fat matrix or coating to improve the mouthfeel of the meat analogue composition when cooked when compared to an analogous meat analogue composition comprising acidic ingredients as such, and/or an analogous meat analogue composition not comprising acidic ingredients.

34. Use of one or more encapsulated acidic ingredients as a tenderness agent in a meat analogue composition; preferably wherein the use further comprises using the fat matrix or coating to further provide improved tenderness of the meat analogue composition when cooked when compared to an analogous meat analogue composition comprising acidic ingredients as such, and/or an analogous meat analogue composition not comprising acidic ingredients.

35. Use according to any one of claims 31 to 34, wherein the use further comprises using the meat analogue composition in a food product.

36. Use according to any one of Claims 31 to 35, wherein the use further comprises using the fat matrix or coating to substantially reduce, inhibit or prevent interaction of the one or more encapsulated acidic ingredients in the meat analogue composition prior to cooking of

the meat analogue composition.

37. A process of manufacturing a meat analogue composition according to any one of Claims 1 to 26, or a food product according to any one of Claims 27 to 30, wherein the process comprises: combining water; non-animal protein; the fat composition; one or more acidic ingredients being optionally encapsulated; and optionally one or more additional components so as to form the meat analogue composition; and optionally forming the meat analogue composition into food products.

38. The process according to Claim 37, the process being performed using:

a) a mixture of water; non-animal protein; and optionally one or more additional components; the method comprising:

b) combining the mixture with the fat composition and one or more acidic ingredients so that the acidic ingredients are encapsulated within a fat matrix of the fat composition; or combining the mixture with the fat composition and one more encapsulated acidic ingredients already coated by a coating; and

c) optionally forming the meat analogue composition into food products.

39. The process according to Claim 37, the process being performed using:

(i) a mixture of water; non-animal protein; one or more encapsulated acidic ingredients already coated by a coating and optionally one or more additional components;

(ii) combining the mixture with the fat composition to form the meat analogue composition; and

(iii) optionally forming the meat analogue composition into food products.